

Appl. No. 10/590,684
Amendment dated December 16, 2009
Reply to Office Action mailed September 16, 2009

In the Claims:

Please amend claims 10-20 and 22-28 as follows:

1.-9. (Cancelled)

10. (Currently Amended) A boarding bridge, comprising:

a tunnel for carrying passengers;

an ~~elevator~~ elevation system for changing the height of the tunnel;

a wheel mechanism for supporting the tunnel and driving the tunnel to extend or retract, provided with

a beam for supporting the elevation system; and

wheels, attached to the beam through a bearing assembly and being in contact with the ground; and

an auxiliary supporting unit for providing an auxiliary support to the tunnel when the boarding bridge is moving or when the boarding bridge is located at a position, said auxiliary supporting unit being located ~~defined at an~~ outside of the wheels and provided with

a two leg support, supports respectively attached under ~~both two~~ ends of the beam and ~~defined located~~ outside of the wheels, wherein ~~the each~~ leg support can be driven to extend and retract; and

a ~~two foot portion~~, portions respectively attached to one end of the leg ~~support~~supports, wherein the foot ~~portion~~portions can be supported on the ground when the leg ~~support~~ issupports are extended and can leave the ground when the leg ~~support~~ issupports are retracted.

11. (Currently Amended) The boarding bridge as claimed in claim 10, wherein ~~the foot portion~~ at least one of the two foot portions is a universal wheel, the first end of the respective leg support is mounted under the beam and the second end of the leg support is connected to the universal wheel.

12. (Currently Amended) The boarding bridge as claimed in claim 11, wherein a buffer is further provided between the leg ~~support~~ supports and the foot ~~portion~~portions.

13. (Currently Amended) The boarding bridge as claimed in claim 10, wherein ~~the~~ each of said leg supportsupports is a power-driven thruster, which has a fixed part mounted under the beam and a moving part connected to the foot portion.

14. (Currently Amended) The boarding bridge as claimed in claim 13, wherein ~~the~~ each of said foot portion-~~portions~~ is configured into a supporting seat.

15. (Currently Amended) The boarding bridge as claimed in claim 13, wherein ~~the~~ each of said foot portion-~~portions~~ is a universal wheel.

16. (Currently Amended) The boarding bridge as claimed in claim 14, wherein the moving part of ~~the~~ each of said power-driven ~~thruster-thrusters~~ is connected to the supporting seat via a hinge.

17. (Currently Amended) The boarding bridge as claimed in claim 13, wherein ~~the~~ each of said power-driven ~~thruster-thrusters~~ is one of a hydraulic cylinder ~~or~~ and an electrical thruster.

18. (Currently Amended) The boarding bridge as claimed in claim 15, wherein an angle detector is in coaxial connection with the bearing assembly for measuring an angle of the wheel mechanism turned relative to a longitudinal axis.

19. (Currently Amended) The boarding bridge as claimed in claim 12, wherein ~~the~~ each of said foot portion-~~portions~~ is driven to extend to be supported on the ground with a pressure by adjusting the leg support of the auxiliary supporting unit.

20. (Currently Amended) A method for improving stability of a boarding bridge, wherein the boarding bridge is provided with

a tunnel for carrying passengers;

an elevation system for changing the height of the tunnel;

a wheel mechanism for supporting the tunnel and driving the tunnel to extend or retract, provided with

a beam for supporting the elevation system; and

wheels, attached to the beam through a bearing assembly and being in contact with the ground, wherein the method comprises:

providing ~~a two leg support~~ supports which can be driven to extend and retract, said two leg supports being attached under two ends of the beam and ~~defined~~ located outside of the wheels; and

providing ~~a two foot portion~~ portions, each of which is attached to one end of the respective leg support ~~supports~~, wherein each of the foot ~~portion-
portions~~ can be

supported on the ground when the respective leg support is extended and can leave the ground when the leg support is retracted;

detecting a direction and an angle at which the wheel mechanism is ~~turned~~slanted when the boarding bridge is moving or when the boarding bridge is located at a position;

extending one of the two leg support supports at a lower end of the beam to drive the corresponding foot portion to be supported on the ground when ~~the~~a detected dimension of the angle is larger than a first predetermined value;

retracting the one of the two leg support supports when the detected dimension of the angle is smaller than a second predetermined value.

21. (Previously Presented) The method as claimed in claim 20, wherein the first predetermined value is larger than the second predetermined value.

22. (Currently Amended) The method as claimed in claim 21, further comprising the step of defining each of the leg support supports as being in ~~into~~ an inactive status when the bridge moves into the area where an angle to which the wheel mechanism is ~~turned~~slanted is larger than the second predetermined angle but smaller

than the first predetermined angle in order to avoid the leg ~~support~~supports from being extended or being retracted frequently.

23. (Currently Amended) The method as claimed in claim 20, wherein ~~the foot portion~~each of the foot portions is configured into a universal wheel.

24. (Currently Amended) The method as claimed in claim 21, further comprising the steps of:

providing a buffer between the foot ~~portion~~portions and the leg ~~support~~supports; and

extending the leg ~~support~~supports until the foot ~~portion~~portions ~~are~~is supported on the ground with a pressure to balance torsion force of the boarding bridge when the boarding bridge is moving.

25. (Currently Amended) The method as claimed in claim 20, wherein the ~~foot portion is~~foot portions are each configured into a supporting seat in a hinge joint with the respective leg support.

26. (Currently Amended) The method as claimed in claim 20, further comprising the step of providing a power-driven mechanism to drive each of the leg ~~support~~supports to extend or retract.

27. (Currently Amended) The method as claimed in claim 20, further comprising the step of providing a manual mechanism to drive each of the leg ~~support~~supports to extend or retract.

28. (Currently Amended) The method as claimed in claim 20, further comprising the step of providing an angle detector coupled to the bearing assembly for obtaining signals in relation with the direction and the angle at which the wheel mechanism is ~~turned~~slanted.